

REMARKS

Claims 1-19 are pending and under consideration in the above-identified application. Claims 8-15 stand withdrawn from consideration pursuant to a restriction requirement.

In the Office Communication dated November 4, 2009, the Examiner stated that claims 1-7 and 16-19 were not readable on the elected invention.

With this Amendment, claims 1, 16 and 17 were amended and claims 20 and 21 were added. No new matter has been introduced as a result of the amendments.

The Examiner stated that the claims now read upon nonelected Group II, which is drawn to “a non-aqueous electrolyte battery including a carbon material added to an exposed edge of a current collector.” Restriction Requirement, page 2 (emphasis added). The claims do not include a limitation that a carbon material is added to an exposed edge of a current collector and therefore do not read on nonelected Group II.

I. 35 U.S.C. § 112 Indefiniteness Rejection of Claims

Claims 1-7 and 16-19 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the Examiner stated that the term “containing a gas adsorbing carbon material within the battery for adsorbing carbon gas” is not clear. In response, this limitation was deleted; as such the above rejection is now moot.

II. 35 U.S.C. § 103 Obviousness Rejection of Claims

Claims 1-5, 7 and 16-19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Mitsufumi et al. (JP 09-035,718), in view of Takeuchi et al. (U.S. Patent No. 5,807,645) or over Takeuchi et al. in view of Mitsufumi et al. (JP 09-035,718). Applicant respectfully traverses this rejection.

The claims require a non-aqueous electrolyte battery that includes an anode having an anode mixture. The anode mixture includes a gas adsorbing carbon material formed of a carbonaceous material including an electroconductive carbon black of very high purity having a specific surface area not less than $30 \text{ m}^2/\text{g}$. As discussed in the specification, the gas adsorbing carbon is effective to adsorb a gas evolved within the battery.

Mitsufumi et al. teaches a nickel hydrogen secondary battery that includes a polymer material as a binder and a liquid electrolyte. Mitsufumi et al., Abstract & paragraph [0017]. Mitsufumi et al. specifically teaches an *aqueous* electrolyte and a *binder* that is a polymer material, whereas the claims require a solid electrolyte that *includes* a polymer material.

Mitsufumi et al. also teaches a nickel hydrogen secondary battery, where the anode has a higher capacity than the cathode. As a result of the difference in capacities, the cathode absorbs gas that evolves within the battery and the carbonaceous material does not need to adsorb gas as required by the claims. Mitsufumi et al., paragraph [0033].

Furthermore, Mitsufumi et al. teaches that the conducting agent has a surface area of more than $700 \text{ m}^2/\text{g}$, whereas the claims require that the surface area of the gas adsorbing material is $30 \text{ m}^2/\text{g}$ or less. Mitsufumi et al., paragraph [0023]. As such, Mitsufumi et al. clearly teaches a conducting agent having a surface area that is significantly greater than the surface area of the gas adsorbing material required by the claims. Accordingly, the surface area required by the claims is not obvious in view of Mitsufumi et al. because the surface area required by the claims does not overlap or lie within the range taught by Mitsufumi et al. *In re Werthiem*, 541 F.2d 257 (CCPA 1976) (finding that a claimed range that overlaps or lies within a disclosed range is obvious). Additionally, Mitsufumi et al. does not teach or suggest a surface area of less than $700 \text{ m}^2/\text{g}$, because Mitsufumi et al. clearly states that, “when said specific surface area is

made into *less* than 700 m²/g, there is a possibility that a flow of hydrogen storing metal alloy powder and a flow with hydrogen storing metal alloy powder and a conductive substrate may fall in said negative electrode.” Mitsufumi et al., paragraph [0023] (emphasis added). As such, Mitsufumi et al. fails to teach or even fairly suggest all the required elements of the claim.

Takeuchi et al. teaches a battery that has a cathode with “a minor amount of a low surface area carbonaceous diluent... added to a cathode active material.” Takeuchi et al., Col. 3, lines 29-31. Takeuchi et al. teaches that the carbonaceous material is added to the cathode active material, as opposed to adding gas adsorbing to the anode mixture as required by the claims.

As such, taken either singularly or in combination with each other, the above cited references fail to teach or even fairly suggest all the required elements of the claims. Thus, independent claim 1 is patentable over the cited references as are dependent claims 2-5, 7 and 16-19 for at least the same reasons. Accordingly, Applicant respectfully requests that the above rejection be withdrawn. Additionally, Applicant requests that the rejection of dependant claim 6, which is based in part on Takeuchi et al. and Mitsufumi et al. be withdrawn for at least the same reasons as discussed above.

III. Conclusion

In view of the above amendments and remarks, Applicant submits that all claims are clearly allowable over the cited prior art, and respectfully requests early and favorable notification to that effect.

Respectfully submitted,

Dated: November 24, 2009

By: /Anne K. Wasilchuk/
Anne K. Wasilchuk
Registration No. 59,592
SONNENSCHNEIDER NATH & ROSENTHAL LLP
P.O. Box 061080
Wacker Drive Station, Sears Tower
Chicago, Illinois 60606-1080
(312) 876-8000